

REMARKS

By the above amendment, claims 1 - 15 have been canceled without prejudice or disclaimer of the subject matter thereof and new claims 28 - 42 corresponding to claims 1 - 15 and amended to overcome the objections to such claims with regard to the informalities noted as well as to clarify features of the present invention have been presented.

As to the provisional rejection of claims 1 - 15 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 16 - 27 of copending Application Serial No. 09/986,577, as recognized by the Examiner, such rejection is a "provisional" rejection since the alleged conflicting claims have not, in fact, been patented. Accordingly, applicants submit that in view of the provisionality of the rejection, a response thereto is not required at this time and applicants note that when an actual rejection is made, applicants will respond thereto. However, applicants traverse the provisional rejection under the judicially created doctrine of obviousness-type double patenting in that as recognized by the Examiner, claims 1 - 15 are directed to a method for pattern inspection and claims 16 - 27 are directed to an apparatus. The Examiner further recognizes that the conflicting claims are not identical and although the Examiner contends that method and apparatus claims are not patentably distinct, applicants submit that method and apparatus represent separate classes of invention, and applicants submit that it is not proper in terms of a double patenting rejection under 35 USC 101 to contend that method claims of one patent can be utilized to reject apparatus claims of another patent or vice versa, as claiming identical subject matter, and applicants submit that such also applies to the judicially created doctrine of obviousness-type double patenting. See In re Vogel, 164 USPQ 619 (CCPA 1970). Thus, applicants submit

that the provisional rejection under the judicially created doctrine of obviousness-type double patenting, as set forth by the Examiner is improper and should be withdrawn.

Turning to the rejection of claims 1 - 15 under 35 USC 103(a) as being unpatentable over Inokuchi USPN 6,259,960 in view of Murase, USPN 5,321,767, this rejection is traversed insofar as it is applicable to the present claims and reconsideration and withdrawal of the rejection are respectfully requested.

As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under '103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge". the court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Applicants note that in setting forth the rejection, the Examiner describes the operation of Inokuchi which does not relate to the claimed features with the Examiner recognizing that "Inokuchi does not explicitly disclose detecting defects of the attained digital image while masking a pre-registered region or pattern". The Examiner contends that Murase discloses a method for forming a mask in an image processing operation and that it would be obvious to combine Inokuchi and Murase to obtain a microscope inspection device that takes an image of a semiconductor and masks out defects that are non-critical. Applicants submit that the Examiner has engaged in a hindsight reconstruction attempt of the present invention utilizing the principle of "obvious to try" which is not the standard of 35 USC 103. Irrespective of the disclosure of Inokuchi and Murase, applicants note that Inokuchi is based upon an application filed in 1997 whereas Murase issued in 1994. Thus, it is readily apparent that Murase was available to Inokuchi at the time of the invention of Inokuchi and Inokuchi did not consider it obvious to incorporate such features as contended by the Examiner into the Inokuchi invention. More particularly, applicants submit that since the disclosure and teaching of Murase was available to Inokuchi, it may be considered that Inokuchi specifically disregarded the disclosure and teachings of Murase and provided no suggestion or utilization in the invention of

Inokuchi. Accordingly, applicants submit that the proposed combination of references is not proper under 35 USC 103 and all claims patentably distinguish thereover.

With respect to claimed features, applicants note that each of independent claims 28, 31, 34 and 38 and the dependent claims thereof corresponding substantially to independent claims 1, 4, 7 and 11, respectively, now recite the feature of outputting or displaying a defect image together with position or positional distribution data by masking or the like of a specific region or pattern, which features are not disclosed by Inokuchi or Murase.

Looking to claim 28, for example, this claim recites the steps of attaining a digital image of an object substrate through microscopic observation thereof, detecting defects of a pattern formed on the object substrate by comparing the digital image with a reference image stored in a memory while masking a pre-registered region or pattern matching with a pre-registered pattern, and outputting an image of a defect among the defects thus detected together with positional distribution data thereof on the object substrate on a display screen. Irrespective of the contention by the Examiner, it is not seen that Inokuchi discloses such features with regard to attaining a digital image, detecting defects in a manner set forth and outputting image of a defect among the defects detected together with positional distribution data thereof on the object substrate on a display screen. It is readily apparent that Murase also does not disclose the aforementioned features, and therefore, the combination, which is improper, as pointed out above, fails to provide the claimed method steps in the sense of 35 USC 103.

It is noted that independent claim 31 recites similar features including displaying a positional distribution of the defects on the object substrate on the display screen together with an enlarged image of a defect among the defects in which the positional distribution is displayed by excluding defects having a feature that matches with the pre-registered feature or distinguishing from defects which do not have the feature that matches with a pre-registered feature. Hereagain, such

features are not disclosed nor taught by Inokuchi and/or Murase in the sense of 35 USC 103 and claim 31 and the dependent claims thereof should be considered to patentably distinguish thereover.

As to claim 34, this claim in addition to reciting obtaining a digital image and comparing the digital image with a reference image stored in the memory to detect defects recites the feature of outputting data of the defects detecting including a position on the objects substrate and an enlarged image of a defect among the detected defects including outputting data regarding defects located in a pre-registered region, or data having a pattern that matches with a pre-registered configuration or pre-registered feature quantity is output so as to be distinguishable from data regarding another detected defect. Applicants submit that Inokuchi and Murase fail to disclose or teach such features taken alone or in combination and claim 34 and the dependent claims thereof should be considered allowable thereover.

With regard to independent claim 38, this claim recites similar features including extract defects from the detected candidate defects by excluding candidate defects located in a predefined region on the object substrate or having a pattern that matches with a pre-registered pattern, displaying an image of a defect among the extracted defects on a display screen together with positional distribution data on the object substrate and feature quantity thereof, as well as classifying the defect which image is displayed on the display screen, and outputting class data of the classified defect together with feature quantity data thereof. It is readily apparent that such features are not disclosed by Inokuchi taken alone or in combination with Murase and that claim 38 and its dependent claims should be considered allowable thereover in the sense of 35 USC 103.

Applicants note that the dependent claims recite further features and irrespective of the position set forth by the Examiner, such features when considered in conjunction with the parent claims are not disclosed or taught in Inokuchi and/or Murase. Furthermore, the Examiner points to claims 14 - 15 and the features thereof

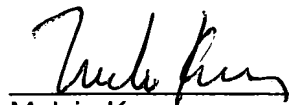
are now set forth in new dependent claims 41 and 42 regarding the feature of CAD. The Examiner contends that it is well known in the art of semiconductor inspection to use CAD, therefore, the Examiner declares "official notice". The Examiner contends it would have been obvious to one of ordinary skill in the art to use CAD to display the defects since it is widely used proven method of semiconductor inspection. Applicants challenge the Examiner's taking of "official notice" and suggest that the Examiner's position is improper as is apparent from the decision of In re Lee, supra. That is, it is improper to utilize what applicant is taught against the teacher without citing art to support the Examiner's position. Thus, applicants submit that the dependent claims recite further features which further patentably distinguish over the cited art and the dependent claims should be considered allowable with the patent claims thereof.

In view of the above amendments and remarks, applicants submit that new claims 28 - 42 patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 501.40830X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Melvin Kraus
Registration No. 22,466

MK/jla
(703) 312-6600